AMENDMENTS TO THE CLAIMS

This listing of the claims replaces all prior versions, and listing of the claims, in this application.

Listing of the Claims

Claims 1-177 (Cancelled)

178. (Previously Presented) A process control system comprising

A. a plurality of devices to any of monitor and control a process,

B. a portable computer equipped for display to, and input from, an operator,

C. a program executing on the portable computer that responds to input to transmit to a digital data processor separate from the portable computer a request to update information that controls one or more of the devices,

D. software executing on the digital data processor, the software responding to selected requests received from the program to issue a command to update information that controls one or more of the devices.

179. (Previously Presented) The process control system of claim 178, wherein the portable computer and the digital data processor are disposed remotely with respect to one another.

180. (Previously Presented) The process control system of claim 178, wherein the program executing on the portable computer responds to input from the operator to transmit a request to get information reflecting the status of one or more of the devices.

181. (Previously Presented) The process control system claim 180, wherein the software executing on the digital data processor responds to selected requests received from the program to issue a command to obtain information reflecting the status of one or more of the devices.

182. (Previously Presented) The process control system of claim 180, where the program executing on portable computer graphically displays data values associated with any of the plurality of devices.

183. (Previously Presented) The process control system of claim 180, wherein the program executing on the portable computer displays on the portable computer at least selected gotten information reflecting the status of one or more devices.

184. (Previously Presented) The process control system of claim 178, adapted to permit the portable computer any or monitor and control one or more plant processes.

185. (Previously Presented) The process control system of claim 184, adapted to provide the portable computer remote access to one or more of said devices for purposes of any of monitoring and controlling said one or more plant processes.

186. (Previously Presented) The process control system of claim 184, adapted to facilitate the provision of technical support via the portable computer.

187. (Previously Presented) The process control system of claim 178, where the program responds to operator input to transmit requests to get a process variable associated with one or more of the devices.

188. (Previously Presented) The process control system of claim 178, wherein the portable computer is a personal digital assistant.

189. (Previously Presented) The process control system of claim 178, wherein the portable computer takes input from any of a keyboard or mouse.

190. (Currently Amended) A process control system of the type having a plurality of devices to any of monitor and control a process, the process control system comprising

A. a portable computer equipped for display to, and input from, an operator,

B. ~~A~~ a program executing on the portable computer that transmits to a digital data processor requests to update information that controls one or more of the devices, the program responding to operator input to transmit requests to get information reflecting the status of one or more of the devices and/or displaying said information,

C. software executing on the digital data processor, the software responding to requests received from the program to selectively (a) issue a command to update information that controls one or more of the devices and (b) obtain information pertaining to one or more of the devices,

D. wherein the digital data processor is disposed remotely from the portable computer and is coupled for communication therewith via a wireless network.

191. (Previously Presented) The process control system of claim 190, adapted to permit the portable computer to any or monitor and control one or more plant processes.

192. (Previously Presented) The process control system of claim 191, adapted to permit the portable computer to provide remote access to one or more of said devices for purposes of any of monitoring and controlling said one or more plant processes.

193. (Previously Presented) The process control system of claim 191, adapted to facilitate the provision of technical support via the portable computer.

194. (Previously Presented) The process control system of any of claims 190 or 191, wherein the portable computer takes input from any of a keyboard or mouse.

195. (Previously Presented) The process control system of any of claims 190 or 191, where the program responds to operator input to transmit requests to get a process variable associated with one or more of the devices.

196. (Previously Presented) The process control system of any of claims 190 or 191, wherein the portable computer is a personal digital assistant.

197. (Previously Presented) The process control system of any of claims 190 or 191, where the program executing on portable computer graphically displays data values associated with any of the plurality of devices.

198. (Previously Presented) The process control system of any of claims 190 or 191, wherein the program executing on the portable computer displays on the portable computer at least selected gotten information reflecting the status of one or more devices.

199. (Previously Presented) A process control system comprising

A. a plurality of devices to any of monitor and control a process,

B. a portable computer equipped for display to, and input from, an operator,

C. a digital data processor coupled to the portable computer via a wireless network,

D. software executing on the digital data processor, the software responding to selected requests received from the portable computer to execute a service for at least one of (i) creating a named object that stores information regarding the one or more control/sensing

devices, (ii) destroying such an object, (iii) accessing information in such an object, (iv) updating information in such an object, (v) determining, from an object name, a physical address associated with such an object, and (vi) providing notification of changes in at least selected information stored in such an object, and

E. the portable computer transmitting to the digital data processor requests for one or more said services, and responding to input to transmit to the digital data processor requests for one or more of said services in order to update information in an object that is associated with one or more of the devices.

200. (Previously Presented) The process control system of claim 199, wherein the portable computer is configured as a process controller.

201. (Previously Presented) The process control system of claim 199, wherein the portable computer transmits to the digital data processor requests for one or more of said services in order to any of monitor and control one or more of said devices.

202. (Previously Presented) The process control system of claim 199, wherein the software executing on the digital data processor responds to selected requests received from the portable computer to issue commands to update information in an object that is associated with one or more of the devices.

203. (Previously Presented) The process control system of claim 199, wherein the portable computer responds to input to transmit requests for one or more said services in order to get information reflecting the status of one or more of the devices.

204. (Previously Presented) The process control system claim 203, wherein the software executing on the digital data processor responds to selected requests received from the portable computer to issue a command to access information in an object associated with one or more of the devices.

205. (Previously Presented) The process control system of claim 204, wherein the portable computer displays on the portable computer at least selected gotten information reflecting the status of one or more devices.

206. (Previously Presented) The process control system of claim 199, where the portable computer graphically displays data values associated with any of the plurality of devices.

207. (Previously Presented) The process control system of claim 199, adapted to permit the portable computer any or monitor and control one or more plant processes.

208. (Previously Presented) The process control system of claim 207, adapted to provide the portable computer remote access to one or more of said devices for purposes of any of monitoring and controlling said one or more plant processes.

209. (Previously Presented) The process control system of claim 207, adapted to facilitate the provision of technical support via the portable computer.

210. (Previously Presented) The process control system of claim 199, where the portable computer responds to operator input to transmit requests to get a process variable associated with one or more of the devices.

211. (Previously Presented) The process control system of claim 199, wherein the portable computer is a personal digital assistant.

212. (Previously Presented) The process control system of claim 199, wherein the portable computer takes input from any of a keyboard or mouse.

213. (Previously Presented) A process control system comprising

A. a plurality of devices to any of monitor and control a process,

B. a portable computer equipped for display to, and input from, an operator,

C. a digital data processor coupled to the portable computer via a wireless network,

D. software executing on the digital data processor, the software responding to selected requests received from the portable computer to execute a service for at least one of (i) creating a named object that stores information regarding the one or more control/sensing devices, (ii) destroying such an object, (iii) accessing information in such an object, (iv) updating information in such an object, (v) determining, from an object name, a physical address associated with such an object, and (vi) providing notification of changes in at least selected information stored in such an object.

214. (Previously Presented) The process control system of claim 213, wherein portable computer transmits to a digital data processor a request for one or more said services.

215. (Previously Presented) The process control system of claim 214, wherein the portable computer is configured as a process controller.

216. (Previously Presented) The process control system of claim 214, wherein the portable computer transmits to the digital data processor requests for one or more of said services in order to any of monitor and control one or more of said devices.

217. (Previously Presented) The process control system of claim 214, wherein the portable computer responds to input to transmit to the digital data processor requests for one or more of said services in order to update information in an object that is associated with one or more of the devices.

218. (Previously Presented) The process control system of claim 217, wherein the software executing on the digital data processor responds to selected requests received from the portable computer to issue commands to update information in an object that is associated with one or more of the devices.

219. (Previously Presented) The process control system of claim 217, wherein the portable computer responds to input to transmit requests for one or more said services in order to get information reflecting the status of one or more of the devices.

220. (Currently Amended) The process control system of claim 217, wherein the software executing on the digital data processor responds to selected requests received from the portable computer to issue a command to access information in an object associated with one or more of the devices.

221. (Previously Presented) The process control system of claim 220, wherein the portable computer displays on the portable computer at least selected gotten information reflecting the status of one or more devices.

222. (Previously Presented) The process control system of claim 214, where the portable computer graphically displays data values associated with any of the plurality of devices.

223. (Previously Presented) The process control system of claim 214, adapted to permit the portable computer any or monitor and control one or more plant processes.

224. (Previously Presented) The process control system of claim 223, adapted to provide the portable computer remote access to one or more of said devices for purposes of any of monitoring and controlling said one or more plant processes.

225. (Previously Presented) The process control system of claim 223, adapted to facilitate the provision of technical support via the portable computer.

226. (Previously Presented) The process control system of claim 214, where the portable computer responds to operator input to transmit requests to get a process variable associated with one or more of the devices.

227. (Previously Presented) The process control system of claim 214, wherein the portable computer is a personal digital assistant.

228. (Previously Presented) The process control system of claim 214, wherein the portable computer takes input from any of a keyboard or mouse.

229. (Previously Presented) A portable computer for use in a control system that includes one or more control/sensing devices to monitor and/or control a process, the portable computer comprising

A. a program that executes on the portable computer in order to configure it as a process controller for purposes of at least controlling the one or more control/sensing devices,

B. the portable computer, when configured as a process controller, exchanging messages over a wireless network with a server digital data processor for purposes of controlling the one or more control/sensing devices,

C. the messages including requests, transmitted by the portable computer to the server digital data processor, for services provided by the server digital data processor including services for at least one of (i) accessing information regarding the one or more control/sensing devices, (ii) updating information regarding the one or more control/sensing devices, (iii) determining a physical address associated with the one or more control/sensing devices, and (iv) providing notification of changes in at least selected information pertaining to the one or more control/sensing devices.

230. (Previously Presented) The portable computer of claim 229, wherein the messages include requests, transmitted by the portable computer to the server digital data processor, for services provided by the server digital data processor including services for at least one of (i) creating a named object that stores information regarding the one or more control/sensing devices, (ii) destroying such an object, (iii) accessing information in such an object, (iv) updating information in such an object, (v) determining, from an object name, a physical address associated with such an object, and (vi) providing notification of changes in at least selected information stored in such an object.

231. (Previously Presented) The portable computer of any claims 229 and 230, wherein the portable computer exchanges messages over the wireless network with the server digital data processor using a TCP/IP protocol.

232. (Previously Presented) The portable computer of claims 229 and 230, wherein said messages are in any of text and ASCII form.

233. (Previously Presented) The portable computer of claims 229 and 230, wherein the messages include requests to get a process variable associated with one or more of the control/sensing devices.

234. (Previously Presented) The portable computer of any of claims 229 and 230 which graphically displays information regarding one or more of the control/sensing devices.

235. (Previously Presented) The portable computer of any of claims 229 and 230 adapted to monitor and control one or more plant processes.

236. (Previously Presented) The portable computer of any of claims 229 and 230 adapted to provide remote access to one or more of said control/sensing devices for purposes of any of monitoring and controlling said one or more plant processes.

237. (Previously Presented) The portable computer of claim 235, adapted to facilitate the provision of technical support via the portable computer.

238. (Previously Presented) The portable computer of any of claims 229 and 230, wherein the messages include requests for one or more of said services in order to monitor one or more of said control/sensing devices.

239. (Previously Presented) The portable computer of any of claims 229 and 230, wherein the portable computer, when configured as a process controller, responds to input to transmit messages that include requests for one or more said services in order to get information reflecting the status of one or more of the control/sensing devices.

240. (Previously Presented) The portable computer of claim 239, wherein the portable computer displays gotten information reflecting the status of one or more control/sensing devices.

241. (Previously Presented) The portable computer of any of claims 229 and 230, wherein the portable computer is a personal digital assistant.

242. (Previously Presented) The portable computer of any of claims 229 and 230, wherein the portable computer takes input from any of a keyboard or mouse.

243. (Previously Presented) A digital data processor for use in a control system that includes one or more control/sensing devices to monitor and/or control a process, the digital data processor comprising

A. a program that executes on the digital data processor in order to configure it as a process controller for purposes of at least controlling the one or more control/sensing devices,

B. the digital data processor, when configured as a process controller, exchanging messages over a wireless network for purposes of controlling the one or more control/sensing devices,

C. the messages including requests, transmitted by the digital data processor for object management services including services for at least one of (i) accessing information regarding the one or more control/sensing devices, (ii) updating information regarding the one or more control/sensing devices, (iii) determining a physical address associated with the one or more control/sensing devices, and (iv) providing notification of changes in at least selected information pertaining to the one or more control/sensing devices.

244. (Previously Presented) The digital data processor of claim 243, wherein the messages include requests for services including at least one of (i) creating a named object that stores information regarding the one or more control/sensing devices, (ii) destroying such an object, (iii) accessing information in such an object, (iv) updating information in such an object, (v) determining, from an object name, a physical address associated with such an object, and (vi) providing notification of changes in at least selected information stored in such an object.

245. (Previously Presented) The digital data processor of any claims 243 and 244, wherein the digital data processor exchanges messages over the wireless network using a TCP/IP protocol.

246. (Previously Presented) The digital data processor of claims 243 and 244, wherein said messages are in any of text and ASCII form.

247. (Previously Presented) The digital data processor of claims 243 and 244, wherein the messages include requests to get a process variable associated with one or more of the control/sensing devices.

248. (Previously Presented) The digital data processor of any of claims 243 and 244 which graphically displays information regarding one or more of the control/sensing devices.

249. (Previously Presented) The digital data processor of any of claims 243 and 244 adapted to monitor and control one or more plant processes.

250. (Previously Presented) The digital data processor of any of claims 243 and 244 adapted to provide remote access to one or more of said control/sensing devices for purposes of any of monitoring and controlling said one or more plant processes.

251. (Previously Presented) The digital data processor of claim 249, adapted to facilitate the provision of technical support via the digital data processor.

252. (Previously Presented) The digital data processor of any of claims 243 and 244, wherein the messages include requests for one or more of said services in order to monitor one or more of said control/sensing devices.

253. (Previously Presented) The digital data processor of any of claims 243 and 244, wherein the digital data processor, when configured as a process controller, responds to input to transmit messages that include requests for one or more said services in order to get information reflecting the status of one or more of the control/sensing devices.

254. (Previously Presented) The digital data processor of claim 253, wherein the digital data processor displays gotten information reflecting the status of one or more control/sensing devices.

255. (Previously Presented) The digital data processor of any of claims 243 and 244, wherein the digital data processor is a personal digital assistant.

256. (Previously Presented) The digital data processor of any of claims 243 and 244, wherein the digital data processor takes input from any of a keyboard or mouse.

257. (Previously Presented) A method of operating a digital data processor for use in a control system that includes one or more control/sensing devices to monitor and/or control a process, said digital data processor including a wireless network connection, the method comprising

A. configuring the digital data processor as a process controller for purposes of controlling one or more of said control/sensing devices, and

B. exchanging one or more messages in a form of any of text and ASCII format via said wireless network connection for purposes of effecting said controlling of said one or more said control/sensing devices.

258. (Previously Presented) The method of claim 257, wherein the digital data processor is any of a portable computer and a personal digital assistant.

259. (Previously Presented) The method of claims 257 and 258, wherein the digital data processor is battery-powered.

260. (Previously Presented) The method of claim 257, wherein the digital data processor operates without a wired network connection to the process control system.

261. (Previously Presented) The method of claim 257, wherein the digital data processor operates without a wired network connection to the process control system.

262. (Previously Presented) The method of claim 257, wherein step (B) includes exchanging over the wireless network messages that include requests, generated by the process

controller, for managing objects within the control system, wherein those objects maintain information on the status of at least selected control/sensing devices.

263. (Previously Presented) The method of claim 262, wherein step (B) includes exchanging over the wireless network one or more messages for remotely managing shared objects of the control system.

264. (Previously Presented) The method of claim 262, wherein step (B) includes exchanging over the wireless network one or more messages for any of creating, registering, locating, accessing and/or updating said objects that maintain information on the status of at least selected control/sensing devices

265. (Previously Presented) The method of claim 257, wherein step (B) includes exchanging over the wireless network one or more messages for any of (i) creating a named object that stores information regarding the one or more control/sensing devices, (ii) destroying such an object, (iii) accessing information in such an object, (iv) updating information in such an object, (v) determining, from an object name, a physical address associated with such an object, and (vi) providing notification of changes in at least selected information stored in such an object.

266. (Previously Presented) The method of claim 257, wherein step (B) includes exchanging over the wireless network one or more messages including requests to get a process variable associated with one or more of the control/sensing devices.

267. (Previously Presented) The method of claim 257, comprising executing a program on said digital data processor in order to configure it as a said processor controller.

268. (Previously Presented) The method of claim 257 comprising exchanging said messages over the wireless network using a TCP/IP protocol.

269. (Canceled)

270. (Previously Presented) The method of claim 257, comprising exchanging one or more said messages in order to get information reflecting the status of one or more of the devices.

271. (Previously Presented) The method of claim 270, comprising graphically displaying information gotten by the digital data processor in response said one or more messages information reflecting the status of one or more of the devices.

272. (Previously Presented) The method of claim 257, comprising exchanging one or more said messages in order to set a value associated with one or more of the control/sensing devices.

273. (Previously Presented) The method of claim 257, comprising wherein the digital data processor is a personal digital assistant.

274. (Previously Presented) The method of claim 257, comprising providing user input to the digital digital data processor via any of a keyboard or mouse.

275. (Previously Presented) The method of claim 257, wherein the digital data processor is adapted to monitor and control one or more plant processes.

276. (Previously Presented) The method of claim 273, wherein the digital data processor is adapted to provide remote access to one or more of said control/sensing devices for purposes of any of monitoring and controlling said one or more plant processes.